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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ieyasu Kobayashi

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EXAMINER

RIVERA, WILLIAM ARAUZ

ART UNIT

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3654

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/914,033	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	William A. Rivera	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____. |
|---|--|

Claim Rejections - 35 USC § 103

Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (U.S. Patent No. 4,576,344).

With respect to Claims 25-28, Sasaki et al teach a polyester film roll wound onto a core. Sasaki et al teach all the elements of the roll but it is unclear as to the difference between the maximum outer diameter and the minimum outer diameter. However, Sasaki, on Column 5, lines 17-62 discusses the disadvantages of the film layers slipping on each other thereby deforming the roll. The text of Column 5, lines 34-40 have been reproduced below.

The polyester film usable for the present invention must exhibit a centerline average surface roughness of from 0.001 to 0.05 microns. If the centerline average surface roughness of the film is more than 0.05 microns, that is, if the friction created between the film layers in the film roll is small, the film layers can easily slip on each other. In this case, the partial elongation of the film

The Sasaki roll must be able to maintain its form over a long period of time. Thus, any variation in the core's outer diameter would manifest itself to the film layers. As such it would have been obvious to one of ordinary skill in the art that any variations in the core diameter would be detrimental to the film of Sasaki because such would increase the chances of adjacent film slipping upon one another and therefore, the film roll is easily deformed thereby rendering the roll useless.

With respect to Claim 29 it is deemed that the flexural modulus of the core of Sasaki et al in the circumferential direction is not less than 13 GPa since the polyester film rolls of the two working examples of Sasaki have the same film length, width, thickness, and rolling hardness as the applicant's polyester film roll. In the alternative, however, even assuming *arguendo* that that

is not the case, it would have been obvious to one of ordinary skill in the art to have provided the core with a high flexural modulus (i.e. not less than 13GPa) in the circumferential direction to obtain a stiff core to contribute in obtaining a more cylindrical roll, as noted above. It would have been obvious to one of ordinary skill in the art that the claimed flexural modulus range would have been an obvious matter of design choice dependent upon a desired core stiffness and manufacturing costs.

With respect to Claims 30-38, both the polyester film roll of Sasaki and that of the applicant's is wrinkle free. Sasaki teaches working examples of a polyester films having lengths of 6,000 m or 5,000 m, widths of 650 mm, and thicknesses of 8 μm or 10 μm . Sasaki teaches that the polyester film rolls of the two working examples, which had roll hardnesses of 98 and 96, respectively, did not wrinkle. As such, the polyester film rolls of the two working examples of Sasaki have the same film length, width, thickness, and rolling hardness as the applicants' polyester film roll. A person of ordinary skill in the art would have readily recognized that a manufactured cylindrical object will have some deformities and hence will have a maximum and a minimum diameter. Moreover, the same person of ordinary skill in the art would have appreciated the desirability of limiting the difference between the maximum diameter and the minimum diameter of the cylindrical object in order to provide uniformity to the cylindrical object. Therefore, because the polyester film roll of Sasaki has the same film length, width, thickness, and rolling hardness as the applicants' polyester film roll, and achieves the same result of a wrinkle free film, there exists a prima facie basis for finding that Sasaki's working examples necessarily have maximum and minimum diameters sufficiently close to meet the relationships of the claim.

In the alternative, however, even assuming *arguendo* that the polyester film rolls of Sasaki might not necessarily have maximum and minimum diameters sufficiently close to meet the relationships of the claims, it would have been obvious for a person of ordinary skill in the art to improve the polyester film roll of Sasaki by controlling the maximum diameter and the minimum diameter of the film rolls to meet the relationships of the claims. One of ordinary skill in the art would have had a design incentive to optimize the uniformity of the cylindrical film rolls of Sasaki. Applicants have not alleged that the proposed improvement would have been beyond the level of ordinary skill in the art or that the improvement would have produced results which one of ordinary skill in the art could not have predicted.

Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al as applied to claims 25-38 above, and further in view of Endo et al (U.S. Patent No. 5,106,681).

With respect to Claims 39-42, Sasaki et al are advanced above. Sasaki et al teach all the elements of the polyester film roll except for the use of inactive particles. However, Endo et al, Column 2, lines 58-67, teaches the use of inactive particles comprising fine spherical silica particles in which the diameter is not less than .01 μm and the inactive particle is not .001% by weight. It would have been obvious to one of ordinary skill in the art to provide Sasaki et al with inactive particles, as taught by Endo et al, for the purpose of obtaining a finer and more uniform film surface.

Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al as applied to claims 25-38 above, and further in view of Ogawa et al (U.S. Patent No. 4,911,951).

With respect to Claims 43-44 and 46 and the difference R between the maximum and minimum diameter values, the above rejection of claims 6 and 9 is incorporated by reference. Sasaki et al teach a polyester film roll 4 free from wrinkles and rolled on a core 2 wherein the polyester film is a film used for the support of a magnetic recording medium (see column 8, lines 55-57).

With respect to claims 45, Sasaki et al does not teach the roll having a ferromagnetic/coating layer being rolled in the inner side. However, Ogawa et al (see at least Figures 1 and 2, and Column 1, lines 50-62 and Column 4, lines 23-31) teach the use of a ferromagnetic/coating layer and the ferromagnetic/coating layer being disposed on a polyester film on the inside. It would have been obvious to one of ordinary skill in the art to provide a ferromagnetic/coating layer to the polyester film of Sasaki, as taught by Ogawa et al, for the purpose of manufacturing a roll magnetic recording media. It would have further been obvious to one of ordinary skill in the art to wind the roll with the ferromagnetic/coating layer on the inside, as taught by Ogawa et al, for the purpose of protecting the layer from foreign substances. Also, the use of magnetic recording medium for digital recording is notoriously old and well known. As such, it would have been obvious to one of ordinary skill in the art that the magnetic recording medium roll could be used for a digital recording.

Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al as applied to claims 25-38 above, and further in view of Leckey et al (U.S. Patent No. 3,427,723).

With respect to Claims 47-48, Sasaki et al are advanced above. It has been established that the Sasaki et al reference is a wrinkle free roll, i.e., no imperfections. Sasaki et al teach all

the elements of the roll except for the plurality of diameters being represented by a curved line. However, Leckey et al, Column 6, lines 62-75, and Column 7, lines 1-20, teach how to obtain a graphical representation of a roll. It would have been obvious to one of ordinary skill in the art that if a graphical representation of the roll were to be obtained, the maximum length from a maximum convex portion of the curved line of the roll of Sasaki et al would not be greater than 300 μm or 500 μm because it is a wrinkle free roll.

Response to Arguments

Applicant's arguments with respect to claims 25-47 have been considered but are moot in view of the new ground(s) of rejection.

The new grounds of rejection were necessitated by applicant's amendment, e.g., the requirement for "*said polyester film contains inactive particles*", Claim 39, lines 1-2.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William A. Rivera whose telephone number is 571-272-6953.

The examiner can normally be reached on Monday to Friday - 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on 571-272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William A Rivera/
Primary Examiner, Art Unit 3654

October 25, 2010